

解答はすべて解答用紙にマークしなさい。

〔I〕 次の 1 ～ 12 の英文の ( ) に入る最も適切な語句を、それぞれ下の ①～④ から一つずつ選びなさい。

1 ( ) its 20 centers and facilities across the U.S., and the only national laboratory in space, NASA studies the Earth, including its climate, our Sun, our solar system and beyond.

- ① Over            ② Toward            ③ Since            ④ At

2 Current methods to create and preserve snow can cost millions of dollars, consume water and energy resources, and ( ) only on a small scale.

- ① work            ② works            ③ worked            ④ working

3 The campers planned to melt snow to drink and cook with, but found it ( ) by chemicals from the volcano.

- ① contaminates            ② contaminating  
③ contaminated            ④ to contaminate

4 Mount Michael has been observed ( ) gases every day from the nearly 10 million gallons of magma underground.

- ① release            ② releases            ③ released            ④ to release

5 Zebra sharks are considered endangered globally, so several aquariums are now letting adults ( ) and produce eggs for conservation efforts.

- ① mate            ② mated            ③ mating            ④ to mate

6 ( ) climate change warms the oceans and kills some of their spectacular coral reefs, scientists are struggling to protect them.

- ① After            ② As            ③ Till            ④ Unless

7 A team discovered ancient tools at a site ( ) early humans are believed to have lived temporarily.

- ① which            ② where            ③ when            ④ what

8 The 19th-century naturalists Alfred Russel Wallace and Alexander von Humboldt produced beautiful illustrations of what they ( ) on their expeditions in the Amazon.

- ① see            ② will see            ③ have seen            ④ had seen

9 Some scientists argue that the Earth would still get warmer, even if humans ( ) on the planet.

- ① didn't live            ② had lived            ③ don't live            ④ would live

10 The seeds must be kept in a cool, dry place to avoid ( ) during storage.

- ① moisten            ② moistened            ③ being moistened            ④ to moisten

11 The migratory behavior of monarch butterflies varies by region, just as the flight pattern of painted lady butterflies ( ).

- ① is            ② has            ③ does            ④ can

12 Efforts to reduce climate change are more cost-effective than adaptation, with the former ( ) more long-term benefits.

- ① bringing            ② brings            ③ bring            ④ to bring

〔II〕 次の(1)～(5)の日本語の意味を表すように英文を作った場合、13～27に入る最も適切な語を、それぞれ下の①～⑦から一つずつ選びなさい。ただし、文頭に入る語も小文字で示してある。

- (1) 温室農業は気候の条件に関係なく、一年中農作物が栽培されるのを可能にする。

Greenhouse farming allows crops to 13 14 15  
climate conditions.

- ① grown ② be ③ the ④ throughout ⑤ of ⑥ year ⑦ regardless

- (2) 健康を保つために体はビタミンDを必要とし、私たちの皮膚は日光にさらされるとそれを作り出す。

In order to stay healthy, the body needs vitamin D, 16 17  
18 sunlight.

- ① produces ② to ③ exposed ④ when ⑤ which ⑥ skin ⑦ our

- (3) 骨格の発達状態を調べることで、人の死亡年齢を推測する考古学者もいる。

Some archaeologists estimate the 19 20 21  
the state of skeletal development.

- ① examining ② by ③ age ④ died ⑤ person ⑥ when ⑦ a

- (4) 非常に多くの科学者は、気候変動が極端な天候を引き起こしているという意見を持っている。

22 23 24 that climate change is triggering  
extreme weather.

- ① are ② scientists ③ the ④ of ⑤ opinion ⑥ many ⑦ so

- (5) コロンビアは世界で最も生物が多様な国の一つであり、コロンブス到来以前の文化の永続的な影響を示す神聖な遺跡が存在する場所である。

Columbia is one of the world's most biodiverse countries and 25  
26 27 the enduring influence of pre-Columbian cultures.

- ① that ② home ③ sacred ④ to ⑤ relics ⑥ is ⑦ mark

〔III〕 次の 28～32 が自然な会話になるように、( )に入る最も適切なものをそれぞれ下の①～④から一つずつ選びなさい。

28 A: So, what looks good to you?

B: I'm leaning toward the spaghetti. How about you?

A: I'm thinking the pizza might be the best choice. Have you ever tried it?

B: No, ( ) Is it good?

A: Oh, it's fantastic. I highly recommend it.

B: All right, you've convinced me. Let's go with the pizza.

① I haven't had the pleasure.

② I've never expected it.

③ I only had a bite of it.

④ I've tried it before.

29 A: What would you like to do this weekend?

B: I'm kind of undecided. Maybe we could catch a movie or something.

A: Well, I was hoping to take advantage of the weather and visit a hiking trail.

B: Oh, I've been away from walking on trails for ages. ( )

A: Great. Let's meet up at the park entrance at 9 a.m. on Saturday.

B: Perfect. I'll bring some snacks and water.

A: Sounds like a plan. See you there.

① Count me in!

② Bring me down!

③ Lean on me!

④ Pick me up!

30 A: Finley Science Museum. Can I help you?

B: Hi, I'm calling about the asteroid lecture at your planetarium this Friday. I represent a group of people with hearing problems who'll be attending the lecture.

A: Oh, yes. I've already been notified, and I've hired a sign-language interpreter.

B: Great, thank you. One more thing — at similar events, there've been problems with the place being too dark. Could you make sure there's a spotlight on the interpreter?

A: ( ) I'll take care of it.

① Not sure about that.

② It depends, I guess.

③ Let me have it.

④ Leave it with me.

31 A: Hello. I'm looking for some information on what art and design classes you have.

B: Oh, we have a lot. It depends on what you're interested in, when you want to study, that kind of thing. The poster on the wall over there lists all the classes.

A: I see. OK, I'll take a look. I can only come after work, though.

B: ( ) We have evening classes starting from the beginning of next month.

- ① That doesn't sound too good.      ② That shouldn't be an issue.  
③ That's exactly what I meant.      ④ That's one way to put it.

32 A: Antonio, do you have any ideas for our new spring clothing designs?

B: I was thinking that maybe we could try something different. How about using flower patterns?

A: ( ) But it would add a step or two to our production schedule, and we have several deadlines coming up soon. So, let's try designing just one patterned fabric for this season. If everything goes smoothly, we can do more next season.

- ① You're welcome.      ② You're making a big deal.  
③ I'm all for it.      ④ I'm fine without it.

〔IV〕 次の英文の 33 に入る最も適切な語を下の ①～④ から一つ選びなさい。

The study, published in *Environmental Research Letters*, explains why recent years saw unprecedented ocean heat levels. The rate of ocean warming has increased by more than four times over the past four decades. Ocean temperatures were rising at about 0.06°C per decade until the late 1980s; however, they are now increasing at 0.27°C per decade, a rate that has shocked researchers. Professor Chris Merchant said the warming "is driven by the Earth's growing energy imbalance, where more solar energy is absorbed than escapes." 33, the findings clearly show the urgent need to reduce fossil fuel emissions and work toward cutting greenhouse gas emissions to zero.

- ① Thus      ② Nevertheless      ③ Conversely      ④ Otherwise

〔V〕 次の英文の 34 に入る最も適切なものを下の ①～④ から一つ選びなさい。

One of every 11 marine plant and animal species assessed by the International Union for Conservation of Nature is now threatened with extinction. That includes dugongs, and some species of abalones, corals, gobies, rockfish, tuna and whales. However, few creatures are being killed off quite as fast as sharks and rays. An estimated 37 percent of shark and ray species face extinction risks, according to research led by Nicholas Dulvy, a leading shark expert with Simon Fraser University, in British Columbia.

34 Both legal and illegal fishing contributes to the risks faced by every threatened shark species and is the *only* major threat for two-thirds of them. Every year, millions of sharks are consumed the world over for their meat, and their fins are used for soup, primarily in Asia.

- ① Tuna is the main target of fishing.  
② Countries are overfishing whales.  
③ Fishing industries have been decreasing.  
④ The driving cause is overfishing.

〔VI〕 次の英文の 35 に入る最も適切な語句を下の ①～④ から一つ選びなさい。

Some monarch butterflies fly thousands of miles each year from southern Canada all the way to the mountains outside of Mexico City. How do they do it? A new study says monarchs that make it to Mexico for the winter have white wing spots three percent larger than those of monarchs sampled from other parts of the North American migration. This may mean that the black-and-white patterns on monarch wings create micro-vortices\* of warm and cool air that in turn reduces drag\*\* while the insects soar in the sun. Three percent may not seem like much — but for animals that weigh as little as a grain of corn and have to fly across a continent, 35 could yield real benefits, the scientists say. Similar drag-reduction properties have been found in the wing patterns of seabirds and one day could lead to more efficient airborne devices. “If you want to develop drones that are flying for a longer time and utilizing energy from sunlight, this is the best thing that we can look at,” says study co-author Mostafa Hassanalani, an associate professor of mechanical engineering at New Mexico Tech.

micro-vortices\* = 微小な渦

drag\*\* = 空気抵抗

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- ① lighter wings
- ② smaller bodies
- ③ colorful patterns
- ④ tiny changes

〔VII〕 次の英文の内容に合致するものを下の ①～④ から一つ選びなさい。

Mushrooms are everywhere — on forest floors, in gardens, and in networks below our feet. The largest organism on Earth is actually a honey mushroom, an underground web of fungi that covers more than 3.7 square miles in Oregon’s Blue Mountains. Yet, mushrooms are poorly understood, and the field of medicinal mushrooms is still in its early stage. Fungi used to be overlooked as a low-calorie, low-nutrition food, but in fact many are full of nutrients. According to biochemist and herbalist Martin Powell, many produce compounds that show potential for improving treatment results for those suffering from diseases such as cancer and dementia.

“Fungi are far more mysterious than plants,” says Robert Beelman, director of the Penn State Center for Plant and Mushroom Foods for Health. He led a recent study showing that two common antioxidants in some mushrooms — ergothioneine and glutathione — have the potential to help prevent diseases that come with aging, such as heart disease and Alzheimer’s. Some species are famous for their hallucinogenic\* properties. Others are not only appreciated by chefs but also show therapeutic value. Perhaps in the future, superfoods will not just be plants, but also fungi.

hallucinogenic\* = 幻覚を起こさせる

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- ① Oregon’s Blue Mountains are an area in which the largest variety of mushrooms are found.
- ② Martin Powell proved that mushrooms are good for people suffering from illnesses like cancer, because they are a low-calorie food.
- ③ Ergothioneine and glutathione are examples of antioxidants that can be utilized for some medical purposes.
- ④ The medical uses of some fungi species are prohibited because of their hallucinogenic properties.

〔VIII〕 次の英文の内容に合致するものを次ページの①～⑦から二つ選びなさい。

Meat from wild animals provides protein for millions of people, but threatens wildlife and can be dangerous for human health. It is said that more than 70 percent of diseases that have emerged in humans since the 1940s — including Ebola, HIV, monkeypox, and coronaviruses — came from wildlife.

In the Congo Basin, tens of millions of animals are hunted each year, some illegally in protected areas. Wild meat is a food and income source for communities that trade along routes connecting forests with villages and cities. Rising demand for wild meat in cities, however, is diminishing both animal populations and rural families' access to food.

The commercial wild meat trade is emptying forests in Africa and around the globe. Studies show that wild meat consumption threatens more than 300 species of land mammals with extinction. In the Amazon Basin alone, hunters target about 200 species, amounting to more than a million tons of meat annually. In Asia, rising demand in cities has created a booming market. In Vietnam, some affluent people want wild meat as a way of signaling prestige and gaining social status, according to studies published during the past decade. In Madagascar, lemurs, which draw tourists from around the world, also appear on dinner tables in rural households. A shift to luxury consumption in cities, where bushmeat sells for twice the price, could threaten the survival of certain lemur species.

Wild meat can be found even in major European and U.S. cities. In 2019 the U.K.'s Border Force, the agency that secures the country's ports, seized more than 2,200 pounds of wild meat, including chimpanzee and giraffe, from travelers entering the country. During the Christmas season in 2021, U.S. Customs and Border Protection agents at Minneapolis-St. Paul International Airport found more than a hundred pounds of wild meat in one week.

For many rural communities in Central Africa, bushmeat has long been a staple food. But now what worries conservation groups most are the harmful effects of overhunting on fragile forest ecosystems, driven by soaring demand for wild meat in big cities, particularly in Brazzaville and neighboring Kinshasa, which have a combined population of 16 million.

"Every year, more than five million tons of bushmeat are extracted from forests in the Congo Basin, and most of that is going to urban centers — not for survival, but as a luxury product," said Lude Kinzonzi, a campaign assistant with the Wildlife Conservation Society's Bushmeat Project, which is attempting to protect wildlife by reducing urban demand for meat from the wild. "If extraction continues at this level, some wildlife will

become extinct," he said. "We're hoping that the campaign can convince people in cities to choose locally raised alternatives to bushmeat."

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- ① Of the human diseases that have emerged since the 1940s, about 30% have been caused by wild animals.
- ② In the Congo Basin, demand for wild meat as a source of both food and income is increasing in rural communities.
- ③ In Vietnam, selling wild meat is becoming an important business activity to gain social status.
- ④ The wild lemur is an example of an animal that has been eaten by people and may be in danger of extinction.
- ⑤ From 2019 to 2021, 2,200 pounds of wild meat were illegally imported from the U.K. to the U.S.
- ⑥ Brazzaville and Kinshasa are big neighboring cities where the demand for wild meat is increasing.
- ⑦ Lude Kinzonzi insists that people should promote meat from the wild as a luxury product.